A Thesis

entitled

Examining L1 and L2 Use in Idea Generation for Japanese ESL Writers

by

Joshua M. Paiz

Submitted to the Graduate Faculty as partial fulfillment of the

requirements for the Master of Arts Degree in English

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An Abstract of

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This thesis examines the effects of the language used in an idea generation task on the quantity and potential quality of ideas developed during a timed idea generation task; quality here being how developed the ideas are. This was done by having two Japanese ESL students, of differing proficiency levels, engage in three rounds of idea generation tasks using their native language (Japanese), their second language (English), or the language of their choice depending on the round. When the participants finished a round of idea generation, they then wrote a short essay, in English.

To code the data, the Japanese was glossed into English. Then all idea generation tasks (English, Japanese, Choice) were coded using a modified version of episodic units (see Brice, 2005). This thesis corroborates findings of Wang and Wen (2003); which seems to suggest that the language used in idea generation may correlate to a writer’s level of English proficiency. Also, it was discovered that the participants of this study appeared to develop their ideas more thoroughly in English, as opposed to Japanese. This may be because of differences in the languages “communication mode(s)” (Scarborough, 1998).
For my dear friends and colleagues, you have helped to support me through this process and have helped me to grow and evolve in intellect, maturity, academic ability, and spirituality. For those that have pushed me on when all I wanted to do was quit. Finally, for those that have celebrated successes with me.
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Chapter One

An Overview of Second Language Writing

Introduction

This study will seek to examine idea generation for Japanese English as a Second Language (ESL) students at the University of Toledo using both their native language, Japanese, and their second language, English. This study will attempt to gain insight into which language’s use, the native language (L1) or the second language (L2), might lead to more ideas being generated, into which language’s use appears to lead to more developed ideas, and into whether or not L2 proficiency plays any role in the above mentioned phenomenon. This will be done by having two, native, Japanese ESL students participate in timed idea-generation and short composition activities. This will be done by having the participants engage in three separate idea-generation and composition tasks. Each round of idea-generation and composition will consist of a five minute idea-generating period were participants will be instructed that they must use their L1, their L2 or the language of their choosing. The participants, Misaki and Hitoshi (pseudonyms), will then be given forty-five minutes to compose a brief essay on the given prompt. Each essay will be written in English. There will be at least one week in between each round to attempt to control for practice effects. Once this is done the idea-generation activities will be coded in an attempt to examine the above areas of language use and idea generation. Before delving further into the current study, this chapter will begin by attempting to accurately place this study in the body of Second Language (L2) writing research.

Writing is an integral part of a college education. Typically most incoming freshmen at the University of Toledo are required to take at least one or two semesters of
dedicated writing courses, and, in some cases, a number of Writing Across the Curriculum courses (WAC). It seems that the reason for this focus on writing is to continue students’ literacy training and to prepare them for lives full of writing (Tarvers and Moore, 2008); the hope being that students will develop writing skills that they can use in their academic, professional and personal lives. While these are the goals of dedicated composition and WAC courses, these classes may not fully address these issues. A likely reason for exerting so much energy on the teaching of writing is that writing, in and of itself, is a very cognitively demanding task; even when writing in ones native language. Writing in a second language, as ESL students are often required to, is even more demanding (see Cumming, 2001; Chenoweth & Hayes, 2001). When an individual engages in the act of composing, they are juggling many different tasks including, but not limited to: planning, editing, revising, and lexical searchers. This can place the student writer under great mental strains even under the most ideal conditions, conditions many ESL students may not find themselves in when writing in their L2 due lack of proficiency and/or confidence in their abilities.

**Writing in a Second Language**

Given that many ESL students are not taught to write in their native languages, we can see that writing in an L2 can become an even more complex and cognitively demanding task. Students writing in an L2 often conduct lexical searches in more than one language, a task which can be very demanding in and of itself. L2 writers often also have to juggle the various, and often very different, writing conventions and organizational patterns that exist in both their L1 and their L2s. For writers with lower L2 proficiency levels this can be particular problematic. Chenoweth (2001) points out that
these lower proficiency individuals have to spend more “conscious attention to word searches and spellings leaving little working memory free to attend to higher level concerns such as generating content (p. 82)…”

**Uniqueness of L2 Writing.** The study of what people do while writing in an L2 is a relatively new field, only beginning to come into its own in the past thirty years (Ferris & Hedgecock, 2005). Due to the relative youth of the field, no over-arching, comprehensive theory of L2 writing has emerged. The newness of the field has caused L2 writing experts to initially borrow greatly from the research done by L1 composition researchers (Ferris & Hedgecock, 2005). This was, arguably, necessary in the earlier days of L2 writing research. However, it is, admittedly, problematic since L2 composition research examines writers who call on two or more languages.

However, in the past two and a half decades many L2 composition researchers have begun examining what L2 writers do when they write in an L2 and how that may be different from what they do when writing in their L1s (Cumming, 2001). Thanks to the work of L2 writing researchers, the field of L2 writing has begun moving away from its roots in L1 writing. These researchers have examined what processes L2 writers use when writing in their L2s (see Bosher, 1998; & Cumming, 2001), the impacts of planning on L2 writing (Ellis, & Yuan, 2004), the role that a student’s L1 may play in L2 writing (see Qi, 1998; Rijlaarsdam, Sanders, van den Bergh, & van Weijen, 2009; Woodall, 2002; & Wang, & Wen, 2002), and what role a student’s L2 proficiency may play in their reliance on their L1 while writing in their L2 (see Rijlaarsdam, et al., 2008; Wang, (2003); & Wang, & Wen2002). In regards to the composing process of L2 writers, Cumming (2001) discovered that the writers in his study focused very heavily on
following accepted L2 forms and making lexical/mechanical decisions. This focus on lower level concerns can fatigue student writers and sap their ability to implement complex ideas in their writing (Cumming, 2001).

The importance of exploring the unique challenges that L2 writers face, and the tools that they use, when engaged in a composition task cannot be ignored. Since these individuals have, at the very least, two different sets of lexicons, writing strategies and expectations of written language, how these languages interact should be taken into consideration. Echevarriazra, Haro, & Valdes, (1992) found that students whose L1s and L2s were cognates often had a small advantage when it came to writing in their L2s. This may be because cognate languages share certain traits in common (lexis, phonology, morphology, and/or syntax), and these potential similarities mean that these individuals do not start from scratch when learning to write in their L2s. However, this potentially constructive transfer only exists in a handful of circumstances, and students whose L1 and L2 are not cognates may not have this advantage. Other research suggests that whether or not the L1 and L2 are cognates students may utilize skills and strategies that they have gained during their L1 literacy training when writing in their L2 (Bosher, 1998). However, how these skills and strategies are utilized varies widely between writers, even ones who are at the same level of L2 proficiency (Bosher, 1998).

**L1 Use for L2 Writing.** When L2 writers engage in a composition task, they often call on their L1s at various stages of the writing process. Armengols-Castelles (2001) examined English as a foreign language (EFL) writers that shared an L1 (Catalan). Armengols-Castelles (2001) discovered that when these writers used Catalan, their native language, for online planning (planning done while engaged in writing) the participants
made more planning comments; the opposite was true when they used their L2s. In the
case of one student there was a large increase in planning statements; 35 when the L1 was
used, versus only nine in the L2 (Armengols-Castelles, 2001, p 95). L1 use was also
found helpful by Echevarria, et al. (1992). While examining learners of Spanish as a
foreign language, they found that students in their study called on their L1 (English)
when engaged in an L2 writing task. These researchers found that students called on
structures and conventions that they had learned while gaining L1 literacy. Relying on
their prior learning, students were able to make educated inferences about how writing
should be organized, how to select an appropriate register, and how to craft their message
in the L2. However, this study, as mention previously, only examined learners of cognate
languages which could explain some of their findings.

Brooks-Carson and Cohen (2001) examined native English speaking students
studying German as a foreign language. In this study, the participants were given two
writing tasks with two similar prompts. However, for one prompt the participants were
asked to write directly in their L2. For the other, they wrote first in English, their L1, and
then translated it directly into German, the L2. Brooks-Carson and Cohen (2001) found
that their participants did better when writing directly in the target language (German).
Chenoweth and Hayes (2001) found that German as a foreign language students would
write more fluently in their L2 when they had had more exposure to and experience with
writing in the target language. The participants in their study that had six or more
semesters worth of German language instruction wrote more fluently, measured in P-
bursts (2.93 words per P-burst(wpb)) than their counterparts with three or fewer
semesters (1.97 wpb)(p. 92). A P-burst was any segment of writing that was terminated
by a pause. Basically, any time the writer stopped writing was counted as one P-burst. This was found to be significantly different through a Wilcoxon-Mann-Whitney test \( (p = .05) \) (p. 92). Chenoweth and Hayes (2001) seem to then argue that the more experience a student has with the L2 the less that they have to rely on their native languages for support when composing.

Additionally, the use of an L1 during L2 composition can lead to mixed results. Woodall (2002) examined learners of Japanese and Spanish as foreign languages and English as a second language. He discovered that student tended to use their L1s when writing on a topic that they found to be more difficult; in this case persuasive essay writing versus personal letter writing (p. 17). Also, students of cognate language wrote essays of a higher quality when they spent time doing on-line planning and content generation in their L1s. However, students of non-cognate languages wrote essays of lower quality when they spent more time using their L1s. This shows that the effectiveness of L1 use during L2 writing can be debated.

**Ideas and Idea Generation**

With a general background of L2 writing theory established, it is now necessary to begin to focus on the specific portion of the writing process that this thesis study will examine, the idea generation stage. Atkinson (2003) points out that ESL writing, much like Native English Speaker (NES) writing before it, is beginning to enter a “post-process” era (p. 4). This new post-process era is highlighted by the view that writing is a “cultural activity by which writers position and reposition themselves in relation to their own and others’ subjectivities, discourses, practices and institutions (Trimbur, 1994, as cited in Atkinson, 2003, p. 3).” Atkinson (2003) appears to agree with Trimbur’s assertion that
writing pedagogies are taking on a more social aspect and that pre-writing (including idea generation) will, and should, remain an important part of L2 writing instruction. This section will first attempt to create a working definition of what an idea is. It will then move on to discuss L1 and L2 use during idea generation in L2 writing.

What is an Idea? Before beginning the discussion of idea generation in L2 writing and how to find ideas in student writing, a definition of an idea must first be established. The word idea is defined by the Merriam-Webster dictionary as a, “formulated thought or opinion (Idea).” This definition, however, lacks a specificity needed for research, and while many have attempted to operationalize what an idea is (see Baruah & Paulus, 2008; Jackson & Poole, 2003; Wang, 2003; and Qi, 1998) there have been many issues which have arisen from these attempts. For example, researchers in the cognitive science have struggled for some time to establish an operationalized definition of what an idea is. However, they have all come to a common answer; namely, that what an idea is, from the standpoint of research, is very subjective (Baruah & Paulus and Jackson & Poole, 2003). The operationalization of the word “idea” must be done, they argue, by the researcher to fit the contexts of their research.

Qi (1998) provides a key example of this. In his examination of L2 writers’ composing processes, the notion of an idea was operationalized as a spoken or written “utterance” in the same language about the same topic (p. 423). This means that anytime a participant uttered something about a given topic in their L1 this was one idea; however, if they switched languages halfway through this would be coded as two ideas. Wang (2003) uses the “idea unit” which is loosely based on Chafe (1985, as cited in Wang,
Idea units for Chafe (1985, as cited in Wang, 2003) were defined as independent linguistic elements marked by punctuation, intonation, or hesitation (p. 356).

However, neither of the above is fitting for the present study. Brice (2005) struggled with using pre-established categories based off of T-units in the coding of her own qualitative data. However, she found that the data would not fit into readily establish categories. Brice (2005) ended up using episodic units to code her data. When using episodic units, the data creates the categories, as opposed to forcing the data into pre-existing categories. This requires the researcher to look over all of the data before making coding decisions and seeing what categories the data seems to suggest.

During the Spring 2010 semester the author conducted a pilot study of this thesis. When defining idea units in the pilot study the author used a modified version of episodic units. After reading over the data, the author chose three categories: base idea, closely related idea, and loosely related idea. A base idea was any word or phrase that spoke to single topic and which lent itself to further explanation or description of said topic. Both loosely related ideas and closely related ideas dealt with words or phrases which clearly linked back to a previous base idea and served to explain it further. However, during the coding for the pilot study it was decided that there was very little difference between closely related and loosely related ideas, and in the final analysis of the data these two were combined to help examine how thought out an idea was.

A second coder was used during the pilot study, as will be used in this thesis study. The second coder was trained using one of the free-writes generated by one of the participants. I had already coded this sample and walked the second coder through the definitions that were being used and how I had coded that sample. After that, the second
coder was given a second, different sample to practice on and then coding began. Using this method we approached 90% inter-rater reliability. However, even the few disagreements that existed were discussed until a mutual agreement could be reached. This pushed the inter-rater reliability higher.

For this thesis the definition of what an idea is has been modified slightly from the pilot study. So, an idea may be a word or phrase that focuses on a single aspect of a single topic. For how the data for this thesis has come together, it may be best to classify an idea into one of two major categories (Base and Related). A Base idea is the simplest of ideas which others may be related to. For example, the base idea of this section of text would be the phrase "Base idea" at the beginning of this sentence. This is the base idea because it is setting up, for the reader, what the general topic, or base idea, of this section of text will be. All other sentence in this section of text would be classed as "related ideas." Related ideas are ideas which add meaning by explaining, describing, defining, or further highlighting part of a base idea.

_Idea Generation in Second Language Writing_. As mentioned previously, Atkinson (2003) found that pre-writing, or idea generation, is something that should always be important in the teaching of L2 writing. Idea generation, much like the rest of L2 writing, is something that is, at the same time similar to and, different from its L1 writing sibling. L2 writing researchers have stressed the importance of giving writers time to engage in both online and offline planning. Online planning is the planning done when a student is actively engaged in writing. Offline planning, on the other hand, is done before actual drafting begins (Armengol-Castilles, 2001 and Ellis & Yuan, 2004). Lally (2000) found that L2 writers that engaged in pre-writing activities, including idea
generation, showed an increase in text quality. Lally (2000) gauged text quality by examining the organization of the text and the global impressions of the raters (p. 431). Further examination of the literature shows that writers engaging in idea generation may still call on their L1s.

Wang (2003) found that the participants in his study called on their L1s for idea generation for both personal letter and argumentative writing. However, the amount of L1 use was found to decrease as students gained L2 proficiency. These findings are corroborated by Wang and Wen (2002) and Rijlaarsdam, Sanders, van den Bergh, and van Weijen (2009). Wang and Wen (2002) found that no matter what level the L2 proficiency of the student writer was they still called on their L1s for idea generation at least 40% of the time (p. 237). Rijlaarsdam, et al. (2009) had similar findings to those of Wang and Wen (2002). However, Rijlaarsdam, et al. (2009) went on to look at how the writer’s L1 use impacted L2 textual quality. They found that L1 use for idea generation had no impact on text quality.

**Introduction to the Current Study**

While L2 writing research has a long history, there are still areas of the field that require further inquiry. This thesis study will attempt to extend the current research to answer questions which have previously been under-examined in the research. While previous research has explored how the L1 is utilized during composition, what stages of the writing process it is used in, and its impacts on text quality, very little has been done in-depth on idea generation. Previous studies that have examined idea generation have focused on how often the L1 was used for idea-generation (Riljaarsdam et al., 2009; Wang & Wen, 2002) and how L1 usage for any pre-writing activities; including, but not
limited to idea-generation, may affect text quality (Lally, 2000). However, none of these studies have sought to examine how the language used for idea generation may impact the number of ideas generated during an idea generation activity; nor have the studies examined so far sought to link the language used to the degree to which ideas are developed. Before examining the current study in greater detail it may be helpful to look at the results of a pilot study conducted by the author in spring of 2010.

**Thesis Pilot Study.** The original impetus for the study came from the author’s experiences teaching *English 1110: Composition I for International Students*. When assigning a free-writing activity to his class the author noticed that students immediately reached for their electronic dictionaries. The students spent the majority of their time looking up words in their dictionaries, as opposed to getting their ideas down on paper. This led to the question of, what would happen if students had been told to use their L1s if they needed to?

During the Spring 2010 Semester, the author carried out a small-scale pilot study of this thesis to test instrument design and feasibility. Two female Japanese ESL students were recruited for the pilot study, Manami and Rena (psuedonyms). These students were selected from the *English 1020: Grammar and Writing* courses offered at the University of Toledo. The author met with Manami and Rena individually on a weekly basis for two weeks to collect the writing samples; two different prompts on similar topics were used. After completing a free-writing activity in Japanese for one prompt and in English for the other, the free-writes were coded in an attempt to be able to quantify the number of ideas and related ideas in each free-write. These free-writes were coded using the base idea, closely related idea, and loosely related idea coding scheme mentioned earlier in
this chapter. A base idea was any word or phrase that focused on a single aspect of a single topic. A closely related idea was any word or phrase that explained or described the previous base idea. A loosely related idea was any word or phrase the further explained or described a previous closely related idea.

When the data was examined, it was discovered that Manami, the participant with more exposure to English language learning and English writing instruction generated more ideas when using her L1, however, developed her ideas more thoroughly when using her L2. Rena, on the other hand, generated the same number of ideas in both languages, but developed them further when using English, her L2. This was determined by looking at the total number of closely and loosely related per each base idea. This was determined by counting the number of related ideas each base idea had connected to it.

The pilot study also attempted to find a correlation between the language used for the free-writing activity and the quality of an essay written based off of the free-write. Using a five point holistic scoring method taken from Uzawa (1996), it was found that Manami did marginally better on the essay that came from her L1 free-write. Rena, on the other hand scored a full point better (a four out of five) on her L1 inspired essay than on her L2 inspired essay.

**Changes to the Pilot Study for the Current Study.** While conducting the pilot study was an informative exercise, there were certain weaknesses in its design that the author has attempted to address in the time between the pilot study and the current thesis study. The first, and potentially most important, issue that arose was an ordering issue. Both Menami and Rena were instructed to use their L1 and L2 on the same prompts. This means that there was no way to determine whether or not the order of the prompts was
what generated the results, as opposed to being the result of what was being tested. To address this for the thesis study the prompts a single prompt will be used in keeping with Hirose (2003) in which a single prompt was used. For this study participants will be presented with the same topic for round of data collection. However, for the round in which a participant must generate ideas in their L1 the prompt will be presented in Japanese; for the round in which a participant must generate ideas in their L2 the prompt will be in English.

The other major issue that arose during the pilot study, and which has subsequently been addressed, were the prompts themselves. While the prompts both dealt with morality in a general sense, one prompt asked about a very specific topic (smoking in public) while the other just asked about morality in general. The specificity of the prompt on public smoking may have caused the participants to call on memories formed in their home country and thereby on memories formed in their L1 (Wang & Wen, 2002), which could explain why it appeared that the L1 free-writes were more effective overall. This has been addressed by using Hirose (2003) as an example. Hirose (2003) argued that there was little sense in using two very similar prompts because there can be subtle perceived differences that could introduce a bias on the part of the participants. She, therefore, advocated for using a single prompt with subtle variations to control for this. Placing the actual writing events at least one week apart should help to prevent participants from just memorizing the prompts or their responses. Also, for each round of data collection, the language of the prompt will change.
Having completed an overview of the literature in which this thesis is situated, as well as of the pilot study which has helped to inform this thesis’ instrument design, it is now time to lay out the research questions that this thesis will seek to examine.

**Research Questions.** The current thesis study will seek to examine the following questions:

1. Do Japanese ESL students generate more ideas in the L1 or L2 for a given prompt?
2. Do these students develop their ideas more thoroughly in their L1 or L2?
3. Does L2 proficiency correlate with the quantity or development of ideas?

This will be completed by examining idea-generation activities completed by native Japanese speaking ESL students enrolled in courses at the University of Toledo. For the purposes of this study episodic units (see Brice, 2005) will be used to code the idea-generation activities. These episodic units will fall into one of two categories: base idea or related idea. A base idea is any word or phrase that focuses on a single aspect of a single topic. A related idea is any word or phrase that serves to illuminate the base idea for the reader.

With the review of literature complete and the research questions established a detailed look at the methodology used in this thesis study follows.
Chapter Two
Methodology

Introduction

This chapter will examine the methods used in this thesis study for participant selection, data collection, data coding and data analysis. It will begin by explaining the challenges faced in participant recruitment due to a limited pool of available participants. This chapter will then move on to detailing the various rounds of data collection. Finally, it will lay out the qualifications of the researcher and coder, and examine the coding methods used.

Participants

As this thesis study examines the idea-generation of Japanese ESL students at the University of Toledo, it was necessary to limit the potential participant pool to students who met that very basic criterion. This study was limited to native Japanese ESL students for two reasons. The first being the researcher’s proficiency with the Japanese language, which allows for more self-sufficiency in the coding, and the second being the researcher’s connection to the Japanese student community at the University of Toledo, which allowed for a hospitable recruiting climate. However, even with the rather “open” recruitment criterion there were numerous challenges to gaining the buy-in of participants. First, there were a very small number of Japanese students currently studying at the University of Toledo at the time of this study. According to Ms. Sayers, the director of the University of Toledo’s intensive English program (IEP) the American Language Institute (ALI) there are not many Japanese students seeking to study in the United States at present. She says that the ALI has seen a startling decrease, not only in Japanese
applicants, but also in inquiries from Japan. She speculates that this could be due, in part, to Japan’s own economic woes. This may have led to the Japanese government taking measures to prevent a possible brain-drain (personal communication, October, 2010).

The second major challenge facing the author in recruiting participants was that of the nine native Japanese ESL students currently enrolled at either the University of Toledo or the American Language Institute (personal communication, October, 2010 & January, 2011) two were instantly ineligible because they had participated in the pilot study (Paiz, 2010). Finally, one cannot ignore the fact that college students are, often, extremely busy, and the thought of doing extra writing may not have been appealing to some possible participants. With these major challenges outlined this chapter will now look at the selection, recruitment, and participants in greater detail.

**Selection Criteria and Participant Pool.** In the previous section it was mentioned that there was a possible participant pool of seven individuals that met the most important and basic of the selection criteria. These individuals were all enrolled in classes either at the University of Toledo or the ALI at the time of the study. Of the seven participants who were still available because they had not taken part in the pilot study, only six were available for recruitment for the thesis. One of the possible participants, a Japanese graduate student at the University of Toledo, Kisaki (pseudonym), was removed from the possible participant pool because of her knowledge of the study.

**Recruitment Methods.** In order to recruit these individuals to participate in this thesis study two of the four, Misaki and Hitoshi (pseudonyms) were initially contacted directly by the author. This was possible because of a pre-existing relationship between the possible participants and the author. Misaki and the author had both been enrolled in
the same Japanese translation course at the University of Toledo during the author’s final year of undergraduate study. Hitoshi was a student in the author’s Intermediate 1 Reading/Writing course, which was taught at the American Language Institute. This initial contact consisted of a brief face-to-face meeting asking the possible participants if they would like to meet with the author to discuss the possibility of participating in a research project that the author was working on.

The other two, Shinji and Hideaki (pseudonyms) were initially contacted through intermediaries. Shinji was initially contacted through his English 1020: Grammar and Writing instructor at the University of Toledo. Hideaki was initially contacted through his friend, the aforementioned Shinji. This initial contact for Shinji and Hideaki took the form of an email asking them to contact the author via email. Only one of the two, Shinji, emailed the researcher to set up an initial in-person meeting.

Once an initial recruitment meeting was set-up, the author met with each of the possible participants individually in either his English Department or American Language Institute office. During these meetings the author explained, very generally, what the study would be looking at--L2 writing done by native Japanese, and also explained the time commitment required if they decided to participate. The author explained that they would meet three times for approximately one hour. There would be at least a one week rest period between each meeting, and they would be engaging in short, ungraded writings. After these meetings, only two of the remaining three agreed to participate in the thesis study (Misaki and Hitoshi). Shinji, understandably, declined to participate as he was taking pre-law classes which consumed a considerable amount of his time.
With the recruitment complete, it may be beneficial to now look more closely at the two participants that agreed to participate in this study. These profiles are being presented to give a more complete picture of the two participants because of how different each individual is, and the fact that these differences may have some bearing on their performance, and therefore the data used, in this study.

**Participant Profiles.** These profiles will introduce the two participants, Misaki and Hitoshi, in greater detail. These profiles were compiled from information gathered from a pre-task survey conducted after the participants agreed to participate in the project. These profiles are also being offered up as a way to show the unique variables of skill level and motivation that each participant brings with them to this project.

As stated previously, the author had a pre-existing relationship with each of the participants. While this may seem to be a short-coming, as the author of this thesis study is not emotionally neutral in regards to these individuals, it should be noted that when doing qualitative research, the relationship shared by the author and the participants can be helpful in handling the data. A potential downside of the lack of emotional neutrality it that it could potentially lead to biases on the part of the researcher and an incorrect or artificial interpretation of the data. However, when dealing with human subjects and qualitative research methods, having some insight into the thought processes of the individuals being studied can be helpful (see Leki, 2007).

**Misaki.** Misaki is a twenty-three year old, female Japanese ESL undergraduate student in her final year of study at the University of Toledo where she is pursuing a Bachelor’s degree in Math Education. She has also completed the highest level of composition required by her major, ENGL 1150, Composition II. She has been in the
United States for the past nine years, five of which were spent in the University of Toledo. She also spent time in American high schools as a study abroad student. It may be worthy to note that Misaki’s motivation for obtaining a Bachelor’s degree in Math Education is to find a job teaching Mathematics at an American high school while she also works towards obtaining American citizenship.

Misaki’s time in the United States, particularly her time in American educational institutions, makes her the participant with a higher level of English language proficiency. Also, her desire for a job in the States, and for eventual citizenship, may have some impact on her learning motivations. Given the importance placed on writing in American institutions, this may have some impact on Misaki’s performance in this study.

Hitoshi. Hitoshi is a twenty-eight year old, Japanese male ESL student currently enrolled at the ALI. Unlike many of the students at the ALI, Hitoshi is not enrolled in English classes in the hopes of eventually matriculating to a degree granting program at the University. Rather, Hitoshi is enrolled in classes at the ALI as part of an advancement program offered through his employer in Japan. It should be noted that Hitoshi already holds an undergraduate level degree from Hiroshima Daigaku (Hiroshima University). Hitoshi had been in the United States for about two months before the start of this study and had never studied in an Anglophone country, besides his current study at the ALI.

While Hitoshi holds an undergraduate degree from a Japanese university, writing, especially writing in English is not something that is often focused on. While English language learning (ELL) is required in Japanese high schools and some universities the focus is often on grammar and vocabulary. Despite potentially having had exposure to English language learning, Hitoshi represents a student of a lower English proficiency
level than Misaki. Also, it may be worthy to note that Hitoshi’s motivations for studying English in an Anglophone country are radically different from Misaki’s. Hitoshi has no desire for citizenship, or even to work in the States. Rather, he is seeking advancement at his current job in Japan.

These profiles have been constructed and presented to the reader to highlight some of the key differences in the individuals participating in this study. These differences represent variables that may have some bearing on the participants’ performance in this study, and therefore the data used in this study. Also, note that the relative proficiency levels have been extrapolated from the students’ time in the US, amount of formal English study, and from writing samples that the researcher has read during his interactions with these two participants as a their teacher (Hitoshi) and a friend (Misaki). With these profiles in place this chapter will now move to looking at the actual tasks which each participant was asked to complete.

Data Collection Tasks and Sampling Rounds

To collect data for this study, the author met with each participant individually. These meetings took place in a secluded study room on the University of Toledo’s main campus at a time mutually agreed on by both the author and the participant. There was one exception to this; this meeting took place in the researcher’s English department office. The data collection for this study took place in three distinct rounds with each round consisting of two different tasks. There was at a one week rest period between the first and second samplings and a two week gap between the second and third samplings, in an attempt to control for any practice effects. These things are worthy of note, because as Bitchner, et al. (2005) point out writing can be impacted by a “complex interaction of
personal, situational, and task factors (202).” However, before examining the individual rounds of data sampling, this section will examine the individual tasks that make up each round in greater detail.

**Idea Generation Task.** The first task that each participant undertook in each round of data sampling was a brief, (five minute) idea-generation task (IGT). The IGT used for this study involved the participant reading over the prompt and writing down as many ideas as they could in a provided booklet of lined paper, in the time allotted. This prompt was provided in either English or Japanese based on the round the participant was in (see Figure 1 below). The prompt dealt with whether or not people should have a career plan before going to college. Participants were instructed that they were to be writing for the entire five minutes and that they should write down every idea that came to their minds. Participants were informed that if they couldn’t think of anything to write they should just write “I don’t know” or “わからない (wakaranai)” over and over again until they thought of something else to write. At the end of the five minutes, participants were instructed to finish writing the thing they were working on and then to stop writing. The language that the participants used to complete the IGTs varied from round to round. For example, in round one they may be told they could only use Japanese and in round two they may be told they could only use English. From here, the round moved into its second stage.

**Writing Task.** The second stage of each round involved the participant being given up to forty-five minutes to complete a short essay, in English, about the prompt provided. These essays were written in booklets of lined paper provided by the author. They were permitted to keep their IGTs so that they could use the ideas contained in them
in their essay. They were also permitted to use dictionaries at this time if they felt they needed one. When a participant completed the writing task, all materials were collected and a meeting time for the next round of data collection was established.

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**Writing Prompt (English Version)**

Instructions: You are to write a brief essay in which you clearly state and support your opinion on the following topic.

Some people feel that a person should know what career they want before beginning college studies. It is a fact that college is a very expensive undertaking, and some people feel that if you do not know what career you want to pursue before one goes to college so that there is no wasted time or money taking extra classes and switching majors.

Others feel that spending time doing general studies and exploring one’s interests is best. These people feel that taking general classes will help people to make a more informed decision about what career that they should pursue.

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**Figure 1.** English and Japanese writing prompts used in this thesis study.

As stated earlier in this section, a single prompt with subtle variations was used for each round of data collection. This was done in keeping with Hirose (2003). Hirose argues that using different, albeit similar, prompts actually introduced more variables into a research instrument and could invalidate the findings of a study. To prevent this in this study, the same prompt was used, but presented differently (see, Figure 1). For example,
if a participant was instructed to complete the IGT in English the prompt was presented in English; if they were told to write in Japanese the prompt was presented in Japanese (see Hirose, 2003). A further discussion of this will be carried out later in this thesis. With a description of the stages in each round established, this section will now more closely examine each participants’ rounds of data collection.

**Round One-Misaki.** For the first round of data sampling with Misaki, the researcher and Misaki met at the study room at the agreed upon time. After engaging in brief small talk, the round began with Misaki filling out an informed consent form and the pre-task survey. Once these documents were collected, the researcher explained the IGT to the participant and asked if she was familiar with the style of IGT being used. Misaki replied that she had used it often in her Composition I and II courses at the University of Toledo. After this was completed Misaki was given the prompt in Japanese and given a moment to read over it. She was instructed to ask for clarification if she needed any. She stated that she had no questions, at which time the author gave her a booklet of lined paper in which to complete the IGT. Misaki was instructed to use only Japanese for coming up with ideas this round, and given five minutes to generate as many ideas as she could.

At the end of the five minutes Misaki was informed to write a brief essay where she stated her opinion on the prompt. No minimum length for the essay was stated. Also, she was permitted to keep her IGT booklet so she could use the ideas she had come up with during the first stage of the round. Misaki finished her essay with about five minutes remaining in the round. When she finished her essay, the author conducted an informal interview to gauge her feelings for the task and her work on it. When asked how she felt
about the usefulness of the IGT, Misaki replied that she felt it was useful, but having to translate her ideas from Japanese (the language of the IGT) into English (the language of the essay) was very time consuming. She claimed that it was like her thoughts were on a “very slow train going in circles (personal communication, November, 2010).” The meeting for round two was scheduled for one week later, at the same time.

**Round One-Hitoshi.** Round one for Hitoshi followed along the same lines as Misaki’s. Initial paper work was filled out and a training session on the IGT method being used was offered. He declined this as it was a method the researcher uses in his Intermediate 1 Reading/Writing classes. He was then given a copy of the prompt. For round one, Hitoshi was instructed to complete the IGT in English, therefore an English version of the prompt was supplied. At the end of the time allotted, a second booklet was provided for Hitoshi to complete the second stage of the IGT. He was given the same instructions as Misaki. Hitoshi took the entirety of the forty-five minutes allotted to complete his essay writing task. After he was finished, the researcher asked him the same questions that were asked at the end of Misaki’s first.

**Round Two-Misaki.** For the second round of data collection, Misaki was instructed to complete the IGT in English and was given the prompt in English. At the end of the time allotted for the first stage, Misaki was given another booklet of lined paper and instructed to write another brief essay. Misaki finished the writing task of this round in about twenty minutes. At the end of this round, a meeting time was set up for two weeks later to complete the final data sampling round.

**Round Two-Hitoshi.** Hitoshi’s second round proceeded much as Misaki’s did except for this round he was require to complete the IGT in Japanese and was given a
Japanese version of the prompt. At the end of the five minutes allotted for stage one, Hitoshi moved on to stage two; which he completed with fifteen minutes remaining.

At the end of the second round, the author asked Hitoshi why he seemed so distracted. Hitoshi replied that he had two major exams the next day. This is important to note because, once again, as Bitchner, et al. (2005) report a confluence of numerous “life” variables can cause different outcomes when the same individual completes the same task at different times. This may have some impact on the data generated by Hitoshi. In regards to how he felt about the usefulness of the IGT, Hitoshi replied that he liked doing it in Japanese because he could come up with better ways of saying things. However, he admits that having to translate those into English takes time (personal communication, November, 2010).

**Round Three-Misaki.** The final round of data collection with Misaki took place after a two week rest period. This rest period was put in place to attempt to help Misaki “forget” about her previous experiences. During this final round, Misaki was told that she could complete the IGT in any language of her choosing and the she should feel free to switching between languages if she felt the need to. So, if an idea came to her in Japanese, she should write it down in Japanese; if it came to her in English, she should write it down English. For this round, Misaki was given the prompt in both English and Japanese. After completing the IGT, she was given forty-five minutes to write one final essay on the prompt.

**Round Three-Hitoshi.** The final round with Hitoshi followed the same structure as Misaki’s final round. He was also instructed to finish the IGT in the language(s) of his choice and the he could even switch between the two if he felt it necessary. The prompt
was, again, provided in both English and Japanese. Hitoshi finished the IGT portion of this round on time and the essay portion with ten minutes to spare.

With each round of data collection detailed, this chapter will now move on to an examination of how the data was prepared for coding and actually coded. This will begin with an overview of the qualifications of the coders before reexamining the definition of an idea used for this study. It will conclude by examining the actual coding of the data.

**Coding the Idea Generation Tasks**

The coding of the IGTs for this thesis study was conducted primarily by the researcher. However, a second coder, a native Japanese graduate student name Kisaki, was utilized in order to test the reliability of the coding scheme being used. The researcher is a graduate student that has been trained in qualitative and quantitative research design and execution. The researcher also holds a level 3 (intermediate level) certification from the Japan Foundation, USA. This certification is obtained by passing the 日本語能力試験 Nihongo Nōryoku Shiken (Japanese Language Proficiency Test or JLPT). The JLPT is currently one of the only tests to certify Japanese language proficiency in the United States. The JLPT is very similar to the TOEFL in content, scope, and method of assessment.

The second coder, Kasumi, is a graduate student in the same program as the author. As this is the case she has had similar training in research methods. Kasumi is also a native speaker of Japanese. This is particularly useful as she was able to clarify the meaning of certain terms which were culturally loaded, but had no direct translation into English. An example of this will come in the next section which examines the processing that the data had to go through before being coded.
Data Processing. Before being coded, all data was transcribe using a Windows based word processor. The author transcribed all English-based IGTs while Kisaki transcribed the Japanese-based IGTs. This was done because Kisaki, being Japanese, has more practice reading and recognizing handwritten Japanese Kanji. Also, the Japanese writing system consists of three different “styles” of writing (Kanji, Hiragana, and Katakana) and while the author is highly proficient in reading Hiragana and Katakana, he is only familiar with about 150 of the 1945 Kanji that are considered “daily use” kanji by the Japanese government.

After the IGTs were transcribed, the Japanese-based IGTs were then glossed by the researcher. This glossing was done to ease the presentation and consumption of the Japanese data by an audience that may have no knowledge of the Japanese language. The glosses were constructed with the assistance of the JDICT online Japanese database which is able to receive Kanji as input and to offer an English meaning. JDICT is unique because it also offers some insight into the cultural meanings of words and phrases. The glosses of the Japanese IGTs were then shown to Kisaki in order to make sure that the meanings used in the glosses were correct. This proved to be necessary as some terms had a meaning or usage which only a native Japanese person, or a non-native speaker with a proficiency level higher than the author’s, might know.

For example, one term which appeared in both Misaki’s and Hitoshi’s IGTs was 学部 (read gakubu). This term’s typical English translation is the faculty (read personnel) of a college. However, in Japanese it can also be used to refer to a person’s field of study. For example, the researcher’s “field of study” is teaching ESL with a focus on second language writing. Had Kisaki not gone over these glosses this very important meaning
would never have been brought to light and the glosses for the IGTs would have proven more difficult to have coded and to have been presented to the reader.

**Ideas in this Study.** As stated in chapter one, an idea is something that has proven difficult for researchers to operationalize (see again Baruah & Paulus, 2008). However, for this study it was decided to utilize episodic units to help operationalize what ideas are. As stated previously, episodic units, as defined by Brice (2005), are units of data, which when used in research, allow the researcher to create categorizations of the data based on the data itself. This is useful because it allows the data produced by the research to guide the researcher to a logical coding method, as opposed to the researcher creating a coding method which may or may not fit the data. Brice (2005) does point out that one drawback of episodic units is that there may be issues of mutual exclusivity. However, this is to be handled on a case by case basis by the coders.

For this study, it was decided to use three different types of ideas. The first type, the Base idea is the simplest of ideas which others may be related to. For example, the base idea of this section of text would be the phrase "Base idea" at the beginning of this line of text. This is the base idea because it is setting up, for the reader, what the general topic, or base idea, of this section of text will be. All other sentence in this section of text would be classed as "related ideas." Related ideas are ideas which add meaning by explaining, describing, defining, or further highlighting part of a base idea. The final category being used is called null. The null category came about as a way to categorize instances of the participant writing “I don’t know” or “Wakaranai” as well as anything that was clearly off topic.
It may be helpful for the reader to see examples of a base, a null, and a related idea from the actual data obtained during the course of the study. It may also be helpful to see examples from both English and Japanese. In Hitoshi’s Japanese IGT, collected during our second meeting he writes 「学生は、ムダな時間を過ごすべきでない。」

“Gaksei ha, mudana jikan wo sugosu beki de nai.” In English this would be, “Students should not waste spent time.” This was coded as a base idea distinct from what precedes it (see appendix C). In the sentence before this, Hitoshi is discussing the fact that a career must be establish before entering college. Here we see a shift from the career and major to the student as an individual. Because of this, the above was determined by both coders to be a base idea. Another example of a base idea can be seen from the following excerpt of Misaki’s English IGT where she writes, “personally I think he/she should know his/her career choice.” Here, the last half of the sentence was determined by the coders to be the base idea of the sentence. Once again, it signaled a move from the prior statement which focused on an if-conditional statement regarding money and selecting a major to the individual’s (Misaki’s) opinion, and removes the if-conditional from the playing field of thought all together. The beginning of this, “personally I think” would be an example of a null idea. The coders decided, that while it signals a shift from a general statement to Misaki’s personal opinion, it does not; based on the wording of the rest of the data, meet the definition of a base idea (see above).

A good example of a related idea can be seen in Hitoshi’s English IGT, which was the first collected. He writes, “but, I didn’t decided what will I do in the future, I was too confused.” In this example the italicized part is the base idea and the underlined part, “I was too confused,” is the related idea because it more fully explains why Hitoshi didn’t
decide what he was going to do in the future. It further illuminates what he meant in the italicized base idea. In his Japanese IGT, collected second he writes, "Gakushuu ha juuyou. Kyariya wo kazensuru tame ni ha." which translated into English as “Learning is important. For the sake of improving one’s career.” It was decided that the underlined portion, “Kyariya wo kazensuru…” was a related idea which could logically be linked back to the base idea of learning is important. It was believed that the writer, based on the data, was further elaborating on why education is important.

Coding Methods. To code the data for this study the transcriptions were printed out. The author went through and read all of the print-outs once without making any coding decisions. After this was finished, and the author could see how everything in the data set being with each, the author went through the data set being examined line by line and coded the data using the base/related/null scheme discussed in the previous section (see figure 2 for an example).

**Figure 2.** An excerpt from Misaki’s English IGT. The italicized section was coded as a base idea by both coders. The underline sections were coded as related ideas by the coders.

In this example, the coders agreed that “If money is a problem” was the base idea for this section of the data set. This was because it serves as the base from which the other ideas follow. Without this initial condition of, “money is a problem” the two results wouldn’t exist. The remainder “he/she should declare major” and “have a career choice” were deemed by the coders to be related ideas which served to further explain their base

- If money is a problem, he/she should declare major or have a career choice
idea of “money is a problem.” Once this initial coding was completed, the second coder was trained and then completed a coding of four of the six data sets.

The Second Coder. The author and the second coder met at a local bakery to complete the training and coding session. These sessions occurred back-to-back in a single afternoon. To train the second coder, the author began by using the explanations of the coding method being used as it was described earlier in this chapter. After this was done the author used Hitoshi’s English IGT as an example. The author explained the reasons for the coding decisions he had made and asked Kisaki if she had any questions. After this was completed the author and Kisaki team-coded Misaki’s Japanese IGT so that the second coder could get practice with the coding methods. After this was completed, Kisaki was given the remaining four data sets (two in English, one in Japanese, one in both English and Japanese) to code. Once the second coder completed her coding, the author and the second coder compared data sets. It was found that there were three data points (out of a possible 85) that the second coder and the author disagreed on, giving an initial inter-rater reliability of 96%. These disagreements arose from one of two key issues. The examples provided below come from the three data points which the researcher and second coder disagreed on, which are outside of the 85 which were agreed on during the initial coding. In keeping with qualitative methods, the three data points where the coders were in disagreement where discussed until some mutual agreement could be reached (see Brice, 2005; Hirose, 2003; and Lally, 2000).

The first issue that arose in the coding revolved around the coding of if/then statements (see figure 3). Kasumi felt that the “then” in an if/then statement should be coded as the base idea in all instances. She argued that since this is the “final state
(personal communication, January, 2011)” that it was the base of what the individuals thought process. The author argued, however, that without the initial condition, without the “if,” the final state would never exist. Therefore, the “if” conditional formed the basis of what a person was saying. We can see this further highlighted by some computer programming languages where the “if” in an if/then statement serves as the trigger for the code. When the “if” portion of the statement is triggered, the then portion of the code will activate. However, if the if portion of code isn’t triggered the code, depending on other variables, the program will skip over that if/then statement. The “then” effectively doesn’t exist without the triggering “if.” It was mutually decided by the coders, in keeping with qualitative research methods, that in handling if/then statements. The “if” conditional was most likely to be the base idea data point while the “then” resultant state would be the related idea (see figure 3).

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Figure 3. Coded excerpt from Misaki’s Japanese IGT showing “if/then” style comment.

In the example above the initial coding completed by the author was that “大学に入学する際、（read daigaku ni nyūgaku suru sai)” was coded as a base idea. Daigaku ni nyūgaku suru sai translates to “If/when entering college.” This was decided to be the base idea because without it there can be nothing else. The result of 学部を決めておくのは大切なことである(read: gakubu o kimete oku no wa taisetsuna kotode aru) which in English means “It’s important to decided a field of study,” was decided to be the related
idea. This was done because the result would not exist without the triggering condition. However, Kisaki felt that these two should be reversed for the aforementioned reasons (see above). The final decision after some discussion and debate amongst the coders was that the initial coding would be used for the above stated reasons.

The second major area of disagreement between the coder arose in how to handle repetition in coding. For example, in Hitoshi’s Japanese IGT he writes, “学習は重要。(gakushuu wa jüyou)” which translates to “learning is important.” In the data sample, this was coded as a base idea. However, later in that same line and again one line later he writes, “学習はいいことである。(gakushuu wa ii kotode aru),” which translates to “learning is good.” According to Kisaki, from the Japanese perspective, these mean basically the same thing. Originally the author had coded these instances of gakyshuu wa ii kotode aru as being related ideas connected to gakushuu wa jüyou. After discussing the matter with the second coder, it was decided that this was an instance of repeating the same meaning, but using different words. It was then decided to code this as a repeat of the initial base idea. With this coded as a repeated base idea neither instance of gakushuu wa ii kotode aru was counted towards the final idea counts which were completed for all data sets.

With the methodology of this study established the next chapter of this thesis can now examine the findings and results of this study. This thesis will then look at the implications of these findings before examining the limitations of this study.
Chapter Three

Results, Discussion & Limitations

Introduction

With the participants and methodology for the study established, this thesis can now move to a presentation of the findings of the study. Once the results have been laid out for the reader, this chapter will attempt to offer a discussion of those results, looking particularly at what implications may exist for both L2 writing pedagogy and future research. It will then conclude by examining the limitations of this study, as well discussing the limitations of research that attempts to operationalize and work with the notion of an idea. It is hoped that this will add to the conversation about the feasibility and validity of research that works with this difficult concept.

Results

The results of this thesis study are presented below. These results have been organized by the language used during the idea generation task (IGT). This section will begin by examining the results from the English IGTs, the participants’ second language before moving on to the English IGTs. It will conclude by reporting what arose during the choice based IGTs.

**English-only IGT.** As stated previously, the English-only IGT was completed during first data collection session. For this session, each participant was given the prompt in English and given five minutes to come up with as many ideas as they could. It is also important to recall that Hitoshi has a lower English proficiency than Misaki because this may explain some of the results seen below; namely that it may explain why
Misaki may have fewer ideas in her IGTs that Hitoshi, but why those ideas were more thoroughly developed. Table 1 below shows the participants’ results for the English-only IGT. From this table we can see that Hitoshi came up with a total of three base ideas and nine related ideas. This gave him a ratio of three related ideas for each base idea; which is an average of 2.667 related ideas per base idea. Misaki, on the other hand, had only two base ideas and eight related ideas. This gave her a ratio of four related ideas per each base idea, or an average of four related ideas per base idea.

Table 1

*Results from Hitoshi & Misaki’s English-only IGT*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Total # of base ideas</th>
<th>Total # of related idea</th>
<th>Ratio of base to related ideas</th>
<th>Average # of related per base ideas.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hitoshi</td>
<td>3</td>
<td>9</td>
<td>1:3</td>
<td>2.667</td>
</tr>
<tr>
<td>Misaki</td>
<td>2</td>
<td>8</td>
<td>1:4</td>
<td>4</td>
</tr>
</tbody>
</table>

*Hitoshi’s English IGT.* In his English-only IGT (see appendix A), Hitoshi came up with three base ideas and nine related ideas in the five minutes allotted. His first two base ideas, “people decided (major) before go to college is good,” and “people decided their major until they are in college is good,” set up two possible stances he could take in his essay. The former establishes the stance of deciding on one’s field of study before they enter college.

This is highlighted by the two related ideas which come after this, “because it saves money,” and “if they changed the major, they spend money and time.” These two related ideas appear to highlight the reason(s) that Hitoshi sees behind choosing a major before going to college. While the second related idea, “if they changed…” repeats the
idea of saving money it takes it even further by linking it to the extra money spent on taking extra classes which are often times associated with a change in major. While the latter idea presented above seems to be restating the first, once it is paired with its accompanying related ideas it becomes clearer that “people decide their major until they are in college…” is actually referring to people who decide their major after entering college. The three related ideas which showcase this apparent shift in stance are, “various knolwed (sic) help them to decide, “it is good” and “The knowledge to know many things are his mind changing.” Based on the language used here, it becomes apparent that Hitoshi is referring to the time after one has entered college and taken a variety of courses. This varied knowledge base would, according to his IGT, gives an individual enough exposure to various fields of study, thereby enabling them to make the right choice in regards to their major.

In his final base idea Hitoshi shifts focus again this time moving into the realm of personal experience. He says, “I didn’t decide what will (sic) I do in the future.” He goes on to elaborate on this by adding to and explaining the situation he was in. He states, in the following four related ideas (see Appendix A), that he was confused and didn’t know what kind of work he would want to do. He goes on to state how this interacts with his job search.

**Misaki’s English-only IGT.** Misaki’s second IGT was completed in English (see appendix B) with the writing prompt also being supplied in English. Misaki had two base ideas and eight related ideas in this IGT, so ten ideas all together. While this may not be as numerous as Hitoshi’s twelve total ideas, she dedicated more thought to these two base
ideas than Hitoshi did to his three. Keep in mind that Hitoshi had a lower English language proficiency than Misaki did at the time of this study.

In this IGT, Misaki has only two base ideas: “If money is a problem,” and “…he/she should know his/her career choice…” She then spends the rest of the IGT expounding on these two IGTS in greater detail. She ends up generating three ideas which were coded as related to the first (“If money is a problem”) and five for second (“…he/she should know his/her career choice…”). These related ideas expand on these two base ideas by highlighting what should be done if money is any issue by stating that majors should be declared before entering university or, that students should at least have made a decision about what their possible careers might be. These ideas also expand on why a person should know their career choice. She writes that it will allow a person to “expand and deepen [their] knowledge on specific field,” and that it will allow a person to take less time or spend less money on schooling. When looking at this IGT, it is much more readily apparent who far along her thoughts are developed this time, as she has continued to expand her ideas from her first IGT (see appendix B and D).

**Japanese-only IGT.** Below is a table summarizing the results from both participants’ Japanese-only IGTS. Table 2 below shows the participants’ results for the Japanese-only IGT. From this table we can see that Hitoshi came up with a total of seven base ideas and eight related ideas. This gave him a ratio of 0.875 related ideas for each base idea; which is an average of 0.875 related ideas per base idea. Misaki, on the other hand, had six base ideas and five related ideas. This gave her a ratio of 0.833 related ideas per each base idea, or an average of 0.833 related ideas per base idea.
Table 2

*Results from Hitoshi and Misaki’s Japanese-only IGT.*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Total # of base ideas</th>
<th>Total # of related idea</th>
<th>Ratio of base to related ideas</th>
<th>Average # of related per base ideas.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hitoshi</td>
<td>7</td>
<td>8</td>
<td>1:0.875</td>
<td>0.875</td>
</tr>
<tr>
<td>Misaki</td>
<td>6</td>
<td>5</td>
<td>1:0.833</td>
<td>0.833</td>
</tr>
</tbody>
</table>

*Hitoshi’s Japanese-only IGT.* As a reminder to the reader, Hitoshi completed the Japanese IGT (see appendix C) during the second meeting with the researcher and was presented the prompt in Japanese. For this IGT, Hitoshi had seven base ideas and eight related ideas. This gives a ratio of 0.875 related ideas per base idea, or an average of 0.875 related ideas per base idea. This would seem to suggest that while Hitoshi came up with a decent number of ideas in the five minutes, he did not spend much time developing them. When comparing this IGT to his English-only IGT, it is apparent that Hitoshi comes up with more base ideas in Japanese than he did in English; however, it is interesting that he does not appear to explore them as fully as he does in the English-only IGT. While in the English-only IGT he has three main ideas and elaborates on them, in the Japanese one he has seven base ideas which cover the need to establish a career before entering college, that students should not waste time, that students must determine their own way, the importance of learning, the downfall of not learning, the need for motivation in learning, and the time to complete a degree. For most of these he writes down nothing more that fits this study’s definition of a related idea. He does not write anything that explains what he means when he says something like, “学習するいは意欲がいる” *Gakushuu surui ha iyoku ga iru* (lit. As for learning, motivation exists).
However, something, which may be, interesting to note is that in this IGT Hitoshi’s writing exhibits a decent amount of repetition; much unlike his English-only IGT where repetition is non-existent. During the course of this IGT he repeats, almost exactly, the idea that students must select a career before entering college (大学入学する前に、キャリアを決める). Whether or not this is merely a feature of his Japanese writing will be discussed further while examining the results from his choice IGT. However, it should be noted that during this meeting Hitoshi seemed visibly distracted. This is important to note because, as Bitchner, et al. (2005) point out, performance on similar writing tasks in similar environments can vary greatly based on any number of outside confounding variables. During our post task discussion it was discovered that Hitoshi was indeed distracted during this session because he had two exams the next morning and was also trying to make arrangements for his significant other’s arrival in the States.

*Misaki’s Japanese-only IGT.* As stated previously, this IGT (see appendix D) was completed during the first data collection session and the prompt was presented in Japanese. Misaki was given five minutes to come up with as many ideas as she could about the topic with the instruction that she must write in Japanese. For this IGT, Misaki had six base ideas and five related ideas. This gives a ration of 0.833 related ideas per base idea, or an average of 0.833 related ideas per base idea. This would seem to suggest that Misaki did not spend much time developing them any single line of thought.

In this IGT, Misaki came up with a total of six base ideas. These covered topics like the need to decide a field of study before entering college (大学入学する際、学部を決めておくのは大切なことであると Daigaku ni haigaku suru sai, gakubu wo
kimete oku no ha taisetsuna goto de aru to), increases in knowledge (せんもん知識がふえる senmon chishiki ga fueru), and the many career choices that a person can gain access to through advanced study (キャリアチョイスが多くなる Kyariya choisu ga ooku naru).

It is interesting because this IGT, much like Hitoshi’s Japanese-only and choice IGTs exhibit similar repetition. However, instead of being word-for-word repetition like in Hitoshi’s writing, Misaki’s appear to function like section headings and she changed the wording a little while maintaining meaning. For example, at one point in this IGT she writes, “大学に入学する際にせんこうを決めないことで良いこと” (Daigaku ni nyuugaku suru sai ni senkou wo kimenai koto de ii koto). This reiterates something she said earlier in the IGT (see above), but she says it in a different way (lit. When entering college the fact of choosing a major is an important thing).

As far as development of thoughts in this IGT, Misaki only writes down related ideas for three of her six base ideas, and two of these base ideas contain two related ideas. These related ideas usually offer some explanation to support her main idea. For example, the first base idea in the piece大学に入学する際、学部を決めておくのは大切なことであると(It’s important to pick ones’ field of study before entering college.), is supported by two base ideas which explain why this is important. The first, 学費をむだにすることがない (read: gakuhi wo muda ni suru koto ga nai), explains tuition is not something that should be wasted. The second related idea appears a line later and reads, 時間通りに卒業することができる (read: Jikan doori ni sotsugyou suru koto ga dekiru), stating that the ability to graduate on time can be affected by the choice to pick
one’s major before entering school. Misaki ends this IGT by repeating these two related ideas, but once again changing the wording (しかし、学費や時間をついやしてしまいます (read: Shikashi, gakuhi ya jikan wo tsuiya shite shimau)).

**Choice IGT.** Below is the data from the participants’ choice IGTs (see appendix E & F). Table 3 below shows the participants’ results for the Japanese-only IGT. From this table we can see that Hitoshi came up with a total of six base ideas and five related ideas. This gave him a ratio of 0.833 related ideas for each base idea; which is an average of 0.83 related ideas per base idea. Misaki, on the other hand, had two base ideas and twelve related ideas. This gave her a ratio of six related ideas per each base idea, or an average of six related ideas per base idea.

*Hitoshi’s choice IGT.* During the final data collection session Hitoshi was instructed that he was free to use any language he desired while working on the IGT (see appendix E), and that he could switch freely between languages if he wanted to. Before examining this IGT more closely it should be noted that the majority of this IGT was completed in Japanese. Of the three places in this IGT where Hitoshi uses English, only one seems to add anything and serves as a base idea. The other two places where English occurred in this IGT were either as tags, “I think not,” or partially erased and incomprehensible.

For this IGT, Hitoshi had six base ideas and five related ideas. This gives a ratio of 0.833 related ideas per base idea, or an average of 0.833 related ideas per base idea. This would seem to suggest that while Hitoshi came up with a decent number of ideas in the five minutes, he did not spend much time developing them. Below is a table summarizing the findings from the third IGT.
Table 3

Results from Hitoshi and Misaki’s Choice IGT

<table>
<thead>
<tr>
<th>Participant</th>
<th>Total # of base ideas</th>
<th>Total # of related idea</th>
<th>Ratio of base to related ideas</th>
<th>Average # of related per base ideas.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hitoshi</td>
<td>6</td>
<td>5</td>
<td>1:0.833</td>
<td>.83</td>
</tr>
<tr>
<td>Misaki</td>
<td>2</td>
<td>12</td>
<td>1:6</td>
<td>6</td>
</tr>
</tbody>
</table>

This IGT shares many surface similarities with the Japanese-only IGT, and it may be tempting to draw a connection between them; keeping in mind that this IGT was written predominately in Japanese. For example, this IGT, just like the one described above, has some repetition of the same base idea almost word for word, “キャリアを決めた方がよいよ” (read: Kyaria wo kimeta kata ga yoi yo). In English, this would translate to, “Having selected a career is good!” Also, this IGT features many base ideas with less elaboration than when he was writing in English. However, in this IGT, Hitoshi once again uses personal examples to support the stance he ended up taking in the terminal essay. He writes, “Completely different, salary is low. because my cas(e) is not good(.)” It is interesting that his switches to English to discuss how this topic has impacted his personal life considering that both his college and his work are in Japan. This is of interest because it has been suggested that it is easier for people to recall memories in the language that memory was formed in. So, what is exhibited in the example above seems to be counter what has been suggested by some research (see Wang & Wen, 2002).
Misaki’s Choice IGT. This IGT (see appendix F) was collected during the final data collection session. It may be interesting to note that for this IGT Misaki wrote entirely in English; the possible importance of this will be discussed in the next section. For this IGT, Misaki had two base ideas and twelve related ideas. This gives a ratio of six related ideas per base idea, or an average of six related ideas per base idea. This would seem to suggest that Misaki was relatively confident in what she wanted to say, and was able to spend more of her off-line planning on developing her lines of thought.

In this IGT, Misaki once again has only two base ideas. On the surface this is similar to the previous IGT, and it may be tempting to point out a possible practice effect. However, these two base ideas are very different. In this IGT the two base ideas are literally polar opposites of each other. In the first she states that, “it’s important to declare major.” In the second, shifts to what will happen if you do not declare a major. She supports the first base idea by giving four examples of what could result from declaring a major upon entry to a university; saying that it gives a person a “clear goal,” and that they end up spending “less time” and “less money.” For the second base idea she gives eight related ideas. Only one of these directly expands on base idea, “have to spend more $ & time…less experience(sic).” The remaining seven form part of a protracted example of fields which a student may not be as successful studying if they wait until after beginning their college careers to work on.

Collected Summary of Results. This section contains the collected results of all IGTs completed by the participants.

Hitoshi’s Collected Results. With the results of Hitoshi’s IGTs laid out individually it is now necessary to look at them collected together in order to see what
answers his data may hold in regards to the research questions in place for this thesis.

Below is a table that collects the information of tables 1-3 into one place for the sake of ease of discussion. While a description of the various parts of this table on above, it may be helpful to call out the important information that appears in the table below. Based on the data gathered by this study, one can see that Hitoshi developed his ideas further when using English; however, he generated more total ideas when using Japanese, keeping in mind that his Choice IGT was completed mostly in Japanese. Misaki, on the other hand developed her ideas further in English and generate more total ideas in English, keeping in mind that she completed her Choice IGT completely in English.

Table 4

Summary of Hitoshi and Misaki’s results

<table>
<thead>
<tr>
<th>Participant</th>
<th>Idea Generation Task</th>
<th># of base ideas</th>
<th># of related ideas</th>
<th>Total # of ideas</th>
<th>Ratio of base to related ideas</th>
<th>Average # related ideas per base ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hitoshi</td>
<td>English-only</td>
<td>3</td>
<td>9</td>
<td>12</td>
<td>1:3</td>
<td>2.667</td>
</tr>
<tr>
<td></td>
<td>Japanese-only</td>
<td>7</td>
<td>8</td>
<td>15</td>
<td>1:0.875</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Choice</td>
<td>6</td>
<td>5</td>
<td>11</td>
<td>1:0.833</td>
<td>.83</td>
</tr>
<tr>
<td>Misaki</td>
<td>English-only</td>
<td>2</td>
<td>8</td>
<td>10</td>
<td>1:4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Japanese-only</td>
<td>6</td>
<td>5</td>
<td>11</td>
<td>1:0.833</td>
<td>.83</td>
</tr>
<tr>
<td></td>
<td>Choice</td>
<td>2</td>
<td>12</td>
<td>14</td>
<td>1:6</td>
<td>6</td>
</tr>
</tbody>
</table>

The table above highlights the findings from both participants’ data. When the findings from Hitoshi’s data alone are applied to the first two research questions of this study the following answers appear to emerge. In regards to questions 1, do Japanese ESL students generate more ideas in the L1 or L2 for a given prompt; it would appear that Hitoshi’s case he generated more ideas in Japanese than in English, especially when
examining his choice IGT where he wrote almost entirely in Japanese of his own volition. However, in regards to question two, which language do Japanese ESL students develop their ideas further in? The answer is, that for Hitoshi’s IGT he developed his ideas more fully in English. This is highlighted by both the higher ratio of base and related ideas and the average number of related ideas per base idea. In order to get an answer for this study’s third researcher question, however, this thesis will now move on to examine the results gained from Misaki, the female Japanese participant’s IGTs.

Collected Summary of Misaki’s Results. It may be helpful to begin with a table collecting the results into one place before looking at the more deeply. The table above also highlights the findings from Misaki’s data. When the findings from her data alone are applied to the first two research questions of this study the following answers appear to emerge. In regards to questions 1, do Japanese ESL students generate more ideas in the L1 or L2 for a given prompt; it would appear that in Misaki’s case she generated more ideas in English than in Japanese. This would hold especially true when one takes into account that she wrote entirely in English in her choice IGT, and that many of these ideas are completely unique to the choice IGT. However, in regards to question two, which language do Japanese ESL students develop their ideas further in, Misaki’s results mirror Hitoshi’s. In both IGTs where English is used she developed these ideas more fully than in her Japanese IGT. This is highlighted by both the higher ratio of base and related ideas and the average number of related ideas per base idea.

With these results laid out for the reader, this thesis will now move to a discussion of these results in relation to the research questions and what implications this may have for future research and L2 writing pedagogy.
Discussion

This section will begin by discussion how the results may answer the research questions laid out in this thesis. Those questions are:

1. Do Japanese ESL students generate more ideas in the L1 or L2 for a given prompt?
2. Do these students develop their ideas more thoroughly in their L1 or L2?
3. Does L2 proficiency correlate with the quantity or development of ideas?

While it may be traditional to answer these questions in order, the researcher feels that it would be more conducive to the later discussion of the implications of these findings to begin by answering the final question before backtracking to examine the first two. This is being done because some feel that L2 proficiency plays the largest role in the language a student writer will self select for IGTs. However, as this discussion will point out, there may be other, extenuating factors, which may need to be considered.

Research Question 3: Does L2 Proficiency Correlate with the Quantity or Development of Ideas? In regards to this research question, it may be helpful to break the discussion of the findings for this answer into two parts. This thesis will begin by examining any correlation between L2 proficiency and idea quantity; it will then move on to examine any correlation between L2 proficiency and idea development.

L2 proficiency and quantity of ideas. For this part of the research question, the data seems to suggest that L2 proficiency does play some role in the quantity of ideas generated. When examining to counts for the total number of ideas generated in any given IGT it is apparent that differences exist For Hitoshi, the student who was studying at the intermediate level at the ALI, he generated the most number of ideas when he was
writing in Japanese. In his Japanese IGT he generated fifteen total ideas. Misaki, on the other hand, generated the most number of ideas during her choice IGT where she used English exclusively. In this IGT she generated fourteen total ideas.

So, a very clear difference exists. Keep in mind that Hitoshi had a lower level of English proficiency at the time of this study. The fact that he was studying at the ALI would suggest that he has a TOEFL score lower than that required for entry into the university (500 PBT). The fact that he was enrolled in an intermediate class would suggest that there would be some time (about two semesters) before he would be able to take the TOEFL and have a high chance for success. This is based on the average time it takes the average student to matriculate from the American Language Institute (B. Sayers, personal communication, June 2010). Misaki, however, was an undergraduate student at the University of Toledo who was only months away from graduation at the time of this study, suggesting a much higher proficiency level. This, coupled with the fact that Hitoshi chose Japanese (the L1) for idea generation when given the option would suggest that some correlation does exist between the language used and the number of ideas generated. This would appear to corroborate Wang and Wen (2003). However, when the second half of this research question is examined something different arises.

L2 proficiency and development of ideas. Sadly, the second half of this question is not as easy to answer. There are a number of potentially confounding variables here which could explain the results, including differences in how each culture (Japanese v. American) uses writing and expectations when they communicate. However, it is also possible that L2 proficiency may impact how we develop our thoughts due to some variable(s) that were not considered in this study. When examining the collected findings
of the two participants and applying this research question something interesting happens. Both Misaki and Hitoshi develop their ideas the furthest when using English. This is reflected in the fact that Hitoshi’s English-only IGT showed the highest level of thought development. Meanwhile, it was Misaki’s choice based IGT, written entirely in English, which exhibited the highest level of thought development. So, in this case English is the language that both participants developed their thoughts most thoroughly in.

However, does this mean that L2 proficiency doesn’t play a role? It is possible, that in some regards it does not. However, when it is taken into account that Hitoshi voluntarily chose to use Japanese in the final IGT, and that Misaki chose to use English, it would seem to suggest that proficiency in the L2 may have some impact on idea generation. The fact that their English IGTs exhibited the most developed ideas could possibly be due to the nature of expression and organization in the two languages. While a truly fascinating possibility, it is outside of the scope of this thesis.

Research Question 1: Do Japanese ESL Students Generate more Ideas in the L1 or L2 for a Given Prompt? In regards to this question, it would appear that this may depend on either the student, the event, or even, as Wang and Wen (2003) suggest, their proficiency level. In this study, the higher proficiency participant came up with more ideas in English (n = 14, see above) during their choice IGT, while the lower proficiency student came up with more ideas in Japanese (n = 15).

At the end of the data collection sessions, I asked each participant which of the three IGT methods they found to be most useful. Both participants answered that they liked being given the option to choose to generate ideas in any language. Hitoshi said that he preferred this method because he could come up with words and phrases in English
and import those into his essay, but that he could come up with core concepts in Japanese; a language he is, “more comfortable thinking in (personal communication, December, 2010).” Misaki expressed similar feelings saying that felt comforted because she could use Japanese if she needed to (personal communication, December, 2010).

Research Question 2: Do These Students Develop Their Ideas more Thoroughly in Their L1 or L2? In regards to this question, the data shows that both participants developed their ideas more thoroughly using the L2. In all cases of IGTs written entirely in English, the students developed their ideas more thoroughly (see table 4 and table 8 above). As stated previously, this is interesting because unlike quantity of ideas generated this does not appear to have any correlation with the participants L2 proficiency levels. It may be possible that this could be due to the either the expressive or organization properties of English, a Germanic language, versus Japanese, a Japonic language (see Kaplan, 1966 & Connor, 1996). Japanese is considered by researchers to be a high-context mode of communication. High-context languages tend to rely on the implicit meaning of what is actually said and a shared knowledge base between the communicative individuals. English, on the other hand, is a high-content communication mode, meaning that the message is in what is actually said (Scarborough, 1998).

Possible Implications for Teaching. While it would be fool-hardy to make broad sweeping claims as to what these basic findings might mean for teaching, the researcher believes that there is one thing that can be taken from these results. That being, when using this type of idea generation task to assist students in coming up with ideas, it may be beneficial to encourage students, particularly lower level students, to make full use of their diverse linguistic backgrounds when generating ideas for writing.
It seems, from the researcher’s experience, that when ESL students are tasked with coming up with ideas in the ESL writing classroom they default to using English. However, based on the students’ proficiency levels, it may be more beneficial for the student to be encouraged to generate ideas in which ever language they choose, and that they should also feel free to switch between languages as ideas come to their mind. This may help to create an environment conducive to optimal idea generation. It may also help students to recognize the value of their linguistic diversity. This may be particularly helpful to lower proficiency students. However, given the findings of this study, it may also suggest, that for some lower proficiency students, more time needs to be spent on idea generation, and that perhaps the ideal situation would be one where the student was told to use the language(s) of their choice first and then to use their other language(s) to explore things from a, possibly, different perspective.

It may also be beneficial for educators to keep in mind that it may be easier to recall memories in the language(s) that they were formed in (Wang & Wen, 2003). This means that when designing writing prompts and guiding student-writers through the invention stage of writing it may be helpful to encourage students, once again, to feel free to call on their L1s as needed. Reminding them, of course, that eventually they will have to find a way to express those ideas in English. However, this should be done with some caution, as it is possible that designing prompts which favor having students write about their home countries and comparing them to the US may be more difficult, overall. This could be because of the potential extra cognitive load of having to switch between languages. This may also suggest that, perhaps, writing prompts should focus on events that have happened while they were in Anglophone countries.
This means that even in programs which have English-only policies that educators and administrators may need to be willing to make concessions in the writing classroom. Not only should L1 use in these writing classrooms be tolerated, it may be beneficial that its potential usefulness should be highlighted by the writing teacher, and that students should be taught strategies for its use which may maximize success in writing.

**Limitations and Future Research**

With the results presented and discussion of these results held, this thesis will conclude by examining the limitations of this study and a call for more research in this area.

**Possible Ordering Effects.** It must be admitted that it is possible that these results may have been impacted by some ordering effect. However, given the limited number of participants, it would have been difficult to use any other ordering patterns and not have had a possible ordering effect arise. One way to have controlled for this would have been having six participants as this would have allowed for all permutations of prompt order to be tested. However, with only two participants this simply wasn’t possible. It should be noted, however, that the researcher feels that the order chosen for this thesis study was appropriate because it did attempt to address the two major variations that exist in the possible prompt order.

**Possible Practice Effects.** Arguably, using the very similar prompts, which differed in presentation, could have led to a practice effect. This is highlighted by one of the participants post task interviews. During the second data collection session, Misaki finished her essay in about twenty minutes. When asked why she felt she finished so early, she stated that the similarity of the prompts allowed her to concretize her stance.
She also stated the doing the IGT in English meant she could just pull ideas directly from her IGT without needing to spend time mentally translating them (personal communication, November, 2011).

While practice effects can be detrimental to the validity of the research results, the researcher maintains that the prompts used in this study represent the best possible approach. Hirose (2003) highlights the fact that using different prompts on seemingly similar topics can introduce a slew of confounding variables. It is possible that a participant may be more interested to a particular prompt, or that one prompt lends itself to more L1 or L2 use. All of which can corrupt the data gained from the research.

This also leaves the question, how does one determine if two different prompts are similar. After completing the pilot study, the researcher presented the findings of that study at the Academic Literacies Symposium at Indiana University of Pennsylvania. During the Q&A session at the end of the presentation one of the audience members pointed out that the prompts used in that study might have appeared similar, in that they both dealt with right and wrong; they were actually very dissimilar, in that one prompt deal with the legality of something and the other with the morality of something (Paiz, 2010; IUP audience member, personal communication, February, 2010). This led to a further review of the literature and the adaptation of the methodologies found in Hirose (2003) which call for a single prompt presented in the appropriate language.

**Difficulties Operationalizing an “Idea.”** During both the pilot study (Paiz, 2010) and the initial stages of this thesis study the operationalization of an “idea” led to lengthy debate between the researcher, his colleagues, and members of his thesis committee. The researcher will concede that working with “ideas” is difficult, and
operationalizing the notion for researcher is even more difficult. Both Jackson and Poole (2003) and Baruah and Paulus (2008), researchers in the cognitive sciences, maintain that what an idea is, is completely arbitrary and that research into ideas does not share any common definition.

While this may be true, and this could be seen as a mark against the validity of research carried out in this vein, the researcher maintains that research can be done into “ideas” and idea generation. Using Brice (2005) and episodic units as a model this researcher was able to create an instrument which yielded an initial inter-coder reliability of 96%, meaning that an “idea” can be operationalized in some workable way. Granted, using episodic units as a base, the definition of base and related ideas for this study are subject to some of the same mutual exclusivity limitations (see Brice, 2005). Also, some of these limitations can be overcome by involving the participants in the research (see Leki, 2007), as they may be able to offer insights into what they meant in their writing. This can be done by making them part of the research process, having them interact and offer their interpretations of the data.

**Future Research.** Despite the difficulties faced in operationalizing an “idea” as a measure for qualitative research, the researcher maintains that further research should be carried out on ideas and idea-generation in L2 writing. While working with ideas, whatever they maybe, is difficult that does not mean that we, as a field, should discount them in the research. However, this may require the adaptation of labor intensive methodologies which will require a greater buy-in from the participant, as they will have to take on a unique role as a participant and a person who helps to interpret the data.
The researcher, personally feels, that the invention stage of writing is a critical stage in composition (for both L1 and L2 writing). Therefore, if we are to gain a better understanding of this crucial stage in the writing process; if we are to be able to describe what occurs in this stage in greater detail; if we are better inform L1 and L2 writing pedagogies, then a stronger operationalization of this term may be required.

This study worked solely with Japanese ESL students. It may be beneficial to the field of L2 writing for a future study to expand this study to include students of a more diverse background. This may offer more insights into how students from various linguistic backgrounds generate ideas for writing. This could then, potentially, inform L2 writing pedagogy improving the efficacy of classroom writing instruction.

Finally, this study only had two participants. While this may represent 29% of the Japanese student population available at the University of Toledo at the time of this study, it is still a small participant pool. It may be beneficial for future research to expand this study to include a larger number of participants, something which could be done by expanding the linguistic backgrounds of the participants. This could lead to results which are generalizable to a greater portion of the population at a given institution. However, the researcher is willing to agree with Leki (2007). Even though there were a limited number of participants this allows for a greater connection to the participants and possibly a better understanding of the data.
Appendix A

Hitoshi’s English IGT

Items in bold were coded as base ideas. Items in italics were coded as related ideas. Brackets ({{}}) indicate a word, or part of a word that was erased.

-- I don’t know
-- {{}} people decided before go to college
is good, because it saves.
Money, if they changed the {{}} major.
They spend money and time.

-- people decided their major until they are
in college is good, {{}} {{}} various knowledge
help them to decide the his major/
It is good. The knowledge to know many
things are his mind changing

-- {{}} but, I didn’t decide what will I do
in the future, I was too confused
to decide what do I have to work
in the future, what should I do. My
work is ???. {{}} When I
When I .. search the job. I can spend
the time {{}} thinking about working which
is done by me,
Appendix B

Misaki’s English IGT

Underlined segments represented a repeated base idea, which was not counted towards the final numbers.

- **If money is a problem**, he/she should declare major or have a career choice
- **personally I think he/she should know his/her career choice**
- He/She can expand & deepens his/her knowledge on specific field
- **Takes less time**
- **Less money**
- **More experience in the field**
- I think general knowledge about other fields can be acquired along the way
- **I think that once he/she is 18 years old, he/she should have most knowledge about what their career choice he/she made is about & if he/she can be passionate about it.**
Appendix C

Hitoshi’s Japanese-only IGT

Career Establish | Because They College | Entering school | Before Career

Because彼らは、大学入学する前に、キャリアを

Decide Should Students Waste Not Time Spend Should Not

Because 人々の興味の無い学部の学習意欲が低いかから。

Learning Not Graduate Time From Work Obtained Not

Because Learning Need

College Entering School Career Decide Not No Good

Because 学習は重要。キャリアを改善する為には、学習はいいことである。

College entered School Time Has About Career Decide More Technical Work

Because 学習する際の意欲がいる

Doctors And Engineer Lawyers

医者や、技術者、弁（護）士
Appendix D

Misaki’s Japanese-only IGT

College | Entering School | When, | College/FoS | Decide | Thing | I think | Begin

○ 大学に入学する際、学部を決めておくのは大切なことであると思う（始め）

Because
なぜなら・・・

Tuition | Waste | Thing | Not
○ 学費をむだにすることがない

Time | On | Graduate | Be able to do | 4-5yrs.
○ 時間通りに卒業することができる（4年～5年）

Self | Learn | to | Long | While Studying | By | My Major | Knowledge | Increase
○ 自分が学びたいことを長い間学ぶことによって、せんもん知識がふえる

College/Field of Study | Decide | by | Bad
学部を決めることによってわけること

Other’s | Self | Knowledge
○ 他の{分やの知識がえられない

If | Self | Choice | Filed | Self | To be cut out for a job | Think | Occupation |
○ もし、自分がえらんだ分野に自分が在いていないと思っても、しょうぎょうを

Change | Thing | Cannot do. Or | Again | Four Years | Near | College | Attend | Must
○ かえることができない。又は、また四年間近く大学に通わなければならない。

College | Entering School | Major | Decide | Thing | Good
大学に入学する際にせんこうを決めないことで良いこと

Various | Subjects’ | Knowledge | Choose | Thing | Be able to
○ 色々なぶんやの知識をえることができる。

○ Career | Choice | Many | Become
○ キャリアチョイスが多くなる。

○ However | Tuition | And | Time | Spend | End up
○ しかし、学費や時間をつイヤしてしまう。
Appendix E

Hitoshi’s Choice IGT

Career Have decided if Good
I think not {{キャリアを決めた方がよい、}}

Because Career important it is because
なぜならキャリアは重要だから
}}}

Specialized Field in deciding Career Progress Mistaken Happen
専門分野を決めずにキャリアを進むとまちがえか（が）おこる

Because Interest not Field May Since
なぜなら、興味のない分野かもしれないから

I (My) Experience Career Decide Good idea
私の経験では、キャリア}}を決めておくとよい。

I Having decided Entered School Then Least Interested Area was
私は決めずに入学した。そしたら全然興味のない分野だった

Therefore Career Have decided if Good
それゆえ、キャリアを決めた方がよい

Therefore,
{{ou I don’t work for {{

{{feer Together Work Does not
キャリアがいつも仕事としていない

Work Ed. Background All people Natural Mistaken
{{キャリアは仕事と学歴は全然（然）違（う）

Completely different, salary is

low. because my can(s) is not

Career Certificate Study
good }}キャリアを（？）学するのは、

Good Thing Might Be
いいことかもしれない

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Appendix F

Misaki’s Choice IGT

--Upon entering college, it’s important to declare major.
--you have clear goal
--less time
--less money
--deepen knowledge on the area of you focus.

--if major was not declared, you will lose have to spend more $ & time.
--less experience {{}}} on the field
--example: education & engineering

➔ student teaching or co-op.
➔ having more experience will reduce chance of making mistake which you can’t take back.
➔ through experience, you can Get a lot of mentoring
➔ observation of both good & bad example
References


Paiz, J. (in progress) Examining the effects of L1 & L2 use for idea generation on final essay qualities for Japanese ESL Writers. (Unpublished Master’s Research). The University of Toledo, Toledo, Ohio.


